

TNF-gamma

1 CCCAATCAAGAGAAATTCCATACTATCACCAGTTGGCCGACTTTCCAAGTCTAGTGCAGA 60
 61 AATCCAAGGCACCTCACACCTAGAGTTCTATACCTCTGAGACTCCAGAGGAAAGAACAA 120
 121 GACAGTGCAGAAGGATATGTTAGAACCCACTGAAAACCTAGAAGGTTGAAAAGGAAGCAT 180
 181 ACCCTCCTGACCTATAAGAAAATTTTCAGTCTGCAGGGGATATCCTTGTGGCCCAAGAC 240
 241 ATTGGTGTTATCATTTGACTAAGAGGAAATTATTTGTGGTGAGCTCTGAGTGAGGATTAG 300
 301 GACCAGGGAGATGCCAAGTTTCTATCACTTACCTCATGCCTGTAAACAAGTGTTTTGTT 360
 361 CCAATTGATGAATCGGGAGAAAACAGTTCAGCCAATCACTTATGGGCACAGAATGGAATT 420
 421 TGAACGGTCTGGTGCCTGCCCTTGTACATCGTAAACAAGAGAGGCATCGATCAGTTTTAT 480
 481 CTGAGTCATTTGGGAAAGGATAATTCTTGCACCAAGCCATTTTCCTAAACACAGAAGAAT 540
 541 AGGGGGATTCCCTTAACCTTCATTGTTCTCCAGGATCATAGGTCTCAGGATAAATTAAAAA 600
 601 TTTTCAGGTCAGACCACTCAGTCTCAGAAAGGCAAAGTAATTTGCCCCAGGTCAGTAGTC 660
 661 CAAGATGTTATTCTCTTTGAACAAATGTGTATGTCCAGTCACATATTCTTCATTCAITCC 720
 721 TCCCCAAAGCAGTTTTTACCTGTTAGGTATATTGGATCACTTTAGTCTATTTTGAAAATG 780
 781 ATATGAGACGCTTTTTAAGCAAAGTCTACAGTTTCCAATGAGAAAATTAATCCTCTTTC 840
 1 M R R F L S K V Y S F P M R K L I L F L 20
 841 TTGTCTTTCCAGTTGTGAGACAAACTCCACACAGCACTTTAAAAATCAGTTCCAGCTC 900
 21 V F P V V R Q T P T Q H F K N Q F P A L 40
 901 TGCAGTGGGAACATGAACTAGGCCTGGCCTTACCAAGAACCGAATGAACTATACCAACA 960
 41 H W E H E L G L A F T K N R M N Y T N K 60
 961 AATTCCTGCTGATCCCAGAGTGGGAGACTACTTCATTTACTCCCAGGTCACATTCCGTG 1020
 61 F L L I P E S G D Y F I Y S Q V T F R G 80

FIG. 1A

TNF- γ

1021 GGATGACCTCTGAGTGCAGTGAATCAGACAAGCAGGCCGACCAAACAAGCCAGACTCCA 1080
 81 M T S E C S E I R Q A G R P N K P D S I 100
 1081 TCACTGTGGTCATCACCAAGGTAACAGACAGCTACCCTGAGCCAACCCAGCTCCTCATCG 1140
 101 T V V I T K V T D S Y P E P T Q L L M G 120
 1141 GGACCAAGTCTGTATGCGAAGTAGGTAGCAACTGGTTCAGCCCATCTACCTCGGAGCCA 1200
 121 T K S V C E V G S N W F Q P I Y L G A M 140
 1201 TGTTCCTCTGCAAGAAGGGGACAAGCTAATGGTGAACGTCAGTGACATCTCTTTGGTGG 1260
 141 F S L Q E G D K L M V N V S D I S L V D 160
 1261 ATTACACAAAAGAAGATAAAACCTTCTTTGGAGCCTTCTTACTATAGGAGGAGAGCAAAT 1320
 161 Y T K E D K T F F G A F L L * 175
 1321 ATCATTATATGAAAGTCCTCTGCCACCGAGTTCCTAATTTCTTTGTTCAAATGTAATTA 1380
 1381 TAACCAGGGGTTTTCTTGGGGCCGGGAGTAGGGGCATTCCACAGGGACAACGGTTTAGC 1440
 1441 TATGAAATTTGGGGCCAAAATTTCACTTCATGTGCCTTACTGATGAGAGTACTAACTG 1500
 1501 GAAAAAGGCTGAAGAGAGCAAATATATTATTAAGATGGGTGGAGGATTGGCGAGTTTCT 1560
 1561 AAATATTAAGACACTGATCACTAAATGAATGGATGATCTACTCGGTCAGGATTGAAAGA 1620
 1621 GAAATATTTCAACACCTCCCTGCTATACAATGGTCACCAAGTGGTCCAGTTATTGTTCAAT 1680
 1681 TTGATCATAAATTTGCTTCAATTCAGGACCTTTGAAGGAAGTCCAAGGAAAGCTCTAGAA 1740
 1741 AACAGTATAAACTTTTCAAGGCAAAATCCTTCACCAATTTTCCACATACTTTTATGCCT 1800
 1801 TGCCTAAAAAATGAAAAGAGAGTTGGTATGTCTCATGAATGTTACACAGAAGGAGTT 1860
 1861 GGTTTTCATGTCATCTACAGCATATGAGAAAAGCTACCTTTCTTTTGATTATGTACACAG 1920
 1921 ATATCTAAATAAGGAAGTTTGAGTTTCACATGTATATCCCAAATACAACAGTTGCTTGTA 1980
 1981 TTCAGTAGAGTTTTCTTGGCCACCTATTTGTGCTGGGTCTACCTTAACCCAGAAGACA 2040

FIG. 1B

TNF- γ

2041 CTATGAAAAACAAGACAGACTCCACTCAAATTTATATGAACACCACTAGATACTTCCTG 2100
2101 ATCAAACATCAGTCAACATACTCTAAAGAATAACTCCAAGTCTTGGCCAGGCCAGTGGC 2160
2161 TCACACCTGTAATCCCAACACTTTGGGAGGCCAAGGTGGGTGGATCATCTAAGGCCGGGA 2220
2221 GTTCAAGACCAGCCTGACCAACGTGGAGAAACCCCATCTCTACTNAAAATACNAAATTAG 2280
2281 CCGGGCGTGGTAGCGCATGGCTGTAANCCTGGCTACTCAGGAGGCCGAGGCAGAANAATT 2340
2341 NCTTGAAGTGGGAGGCAGAGGTGCGGTGAGCCCAGANCGGCCATTGCACTCCAGCCT 2400
2401 GGGTAACAAGAGCAAACTCTGTCCAAAAAAAAAAAAAAAAAAAA 2442

FIG. 1C

MATCH WITH FIG. 2B

FIG. 2A

MATCH WITH FIG. 2A

40	L	T	P	S	A	A	Q	T	A	R	Q	H	P	K	M	H	L	A	H	S	T	L	K	P	A	A	H	L	L	G	TNFBeta		
71	F	-	-	-	-	-	Q	K	L	P	E	E	P	E	T	D	L	L	S	P	G	L	-	-	P	A	A	H	L	L	G	LTbeta	
121	V	S	S	F	E	K	Q	I	A	N	P	S	T	P	S	E	T	K	K	P	-	-	R	S	V	A	H	L	T	G	FASL		
38	-	-	-	-	-	-	P	-	A	L	H	W	F	H	N	R	L	L	A	F	L	T	K	N	R	M	N	Y	T	N	-	K	TNFGamma
95	N	P	Q	A	E	Q	-	Q	L	Q	W	L	R	A	R	A	R	L	N	A	L	L	A	N	G	V	L	R	D	-	N	TNFAalpha	
70	D	P	S	K	Q	-	Q	-	L	W	W	R	A	T	K	E	Q	A	F	L	Q	T	S	G	F	S	L	S	N	-	N	TNFBeta	
95	A	P	L	K	-	Q	-	Q	L	W	W	R	A	T	K	E	Q	A	F	L	I	-	S	G	V	K	Y	K	K	-	G	LTbeta	
149	N	P	L	R	S	S	I	P	L	W	W	R	A	T	K	E	Q	A	F	L	-	-	S	G	V	K	Y	K	K	-	G	FASL	
61	F	L	L	I	P	E	S	G	D	Y	F	I	Y	S	Q	V	T	F	R	G	M	T	S	E	C	S	E	I	R	Q	TNFGamma		
123	Q	L	V	V	P	S	E	G	L	Y	F	I	Y	S	Q	V	L	F	K	G	Q	G	-	-	-	-	-	-	-	-	-	TNFAalpha	
98	S	L	L	V	P	T	S	G	I	Y	F	V	Y	S	Q	V	V	F	S	G	K	A	Y	S	P	K	A	-	-	-	-	TNFBeta	
124	G	L	A	L	P	Q	D	G	L	Y	Y	L	Y	C	L	V	G	Y	R	G	R	A	P	P	G	G	G	D	P	Q	-	LTbeta	
177	G	L	V	I	N	F	A	G	L	Y	F	V	Y	S	K	V	Y	F	R	G	Q	S	-	-	-	-	-	-	-	-	-	FASL	
91	A	G	R	P	N	K	P	D	S	I	T	V	V	I	T	K	V	T	D	V	S	Y	P	E	P	T	Q	-	-	-	-	-	TNFGamma
146	-	-	-	-	-	-	H	V	L	L	T	H	T	I	S	R	I	A	V	S	Y	Q	T	K	V	N	-	-	-	-	-	-	TNFAalpha
125	-	-	-	-	-	-	P	L	Y	L	A	H	V	Q	L	F	I	S	S	Q	Y	P	F	H	V	P	-	-	-	-	-	-	TNFBeta
154	G	-	-	-	-	-	-	-	-	L	R	S	S	L	Y	M	A	S	G	A	Y	G	P	G	T	P	E	L	L	L	L	LTbeta	
204	-	-	-	-	-	-	-	-	-	L	S	H	V	Y	Y	R	R	N	F	K	Y	P	G	D	L	V	-	-	-	-	-	-	FASL

MATCH WITH FIG. 2C

FIG.2B

FIG. 3A

Tissue distribution of TNFgamma mRNA

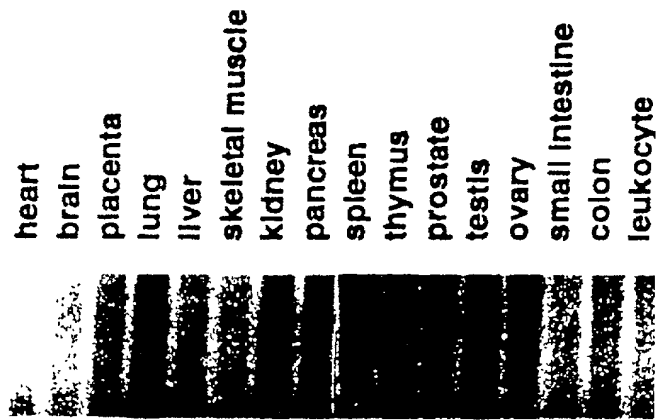
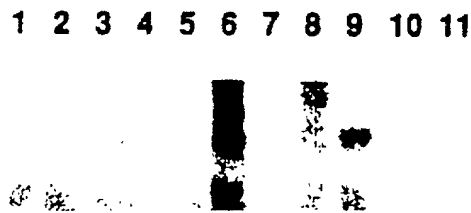


FIG. 3B

Expression of TNFgamma in HUVEC



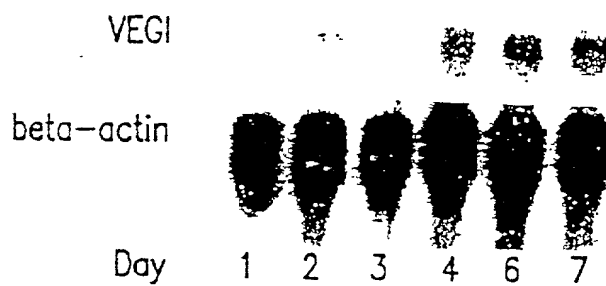
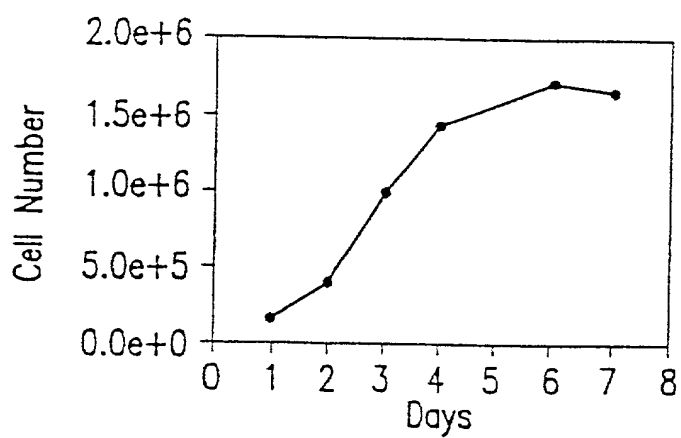


FIG.4

Expression of TNF γ in *E. coli*

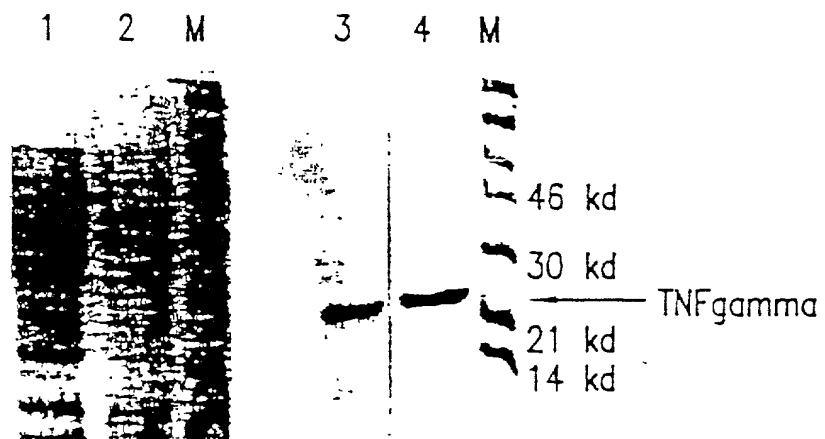


FIG.5

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Expression of TNF_γ in baculovirus system



FIG.6

WEHI164
TNF α

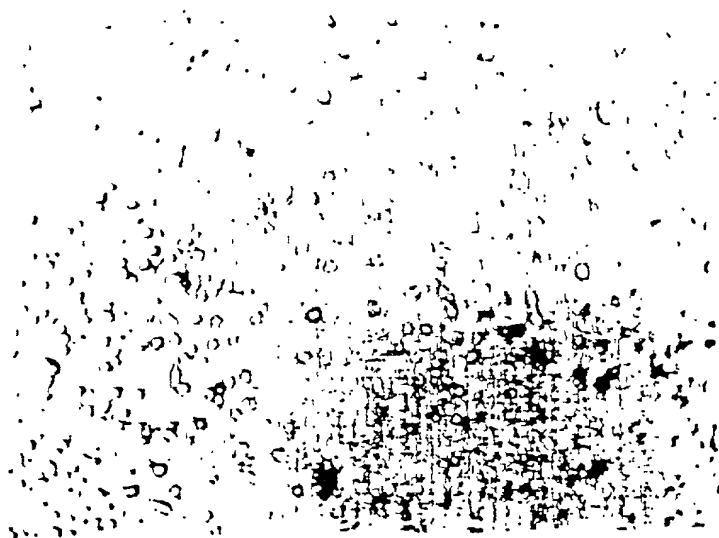


FIG. 7Ab

WEHI164
Control



FIG. 7Aa

FO9020" 65066860

WEHI164
TNF β

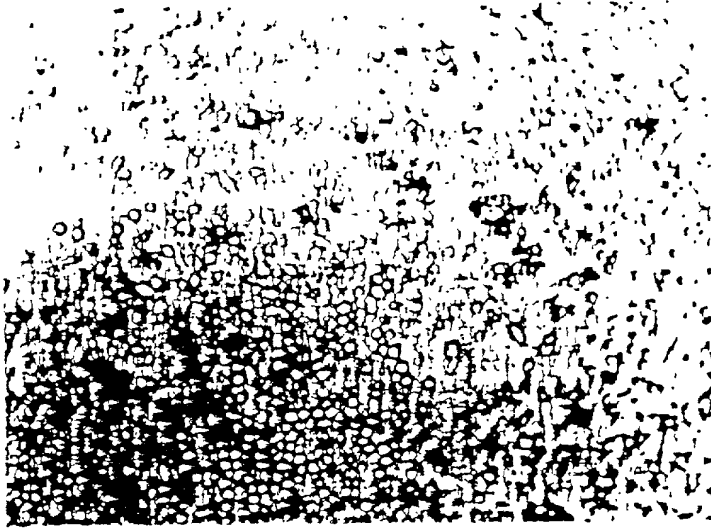


FIG. 7Ad

WEHI164
TNF γ

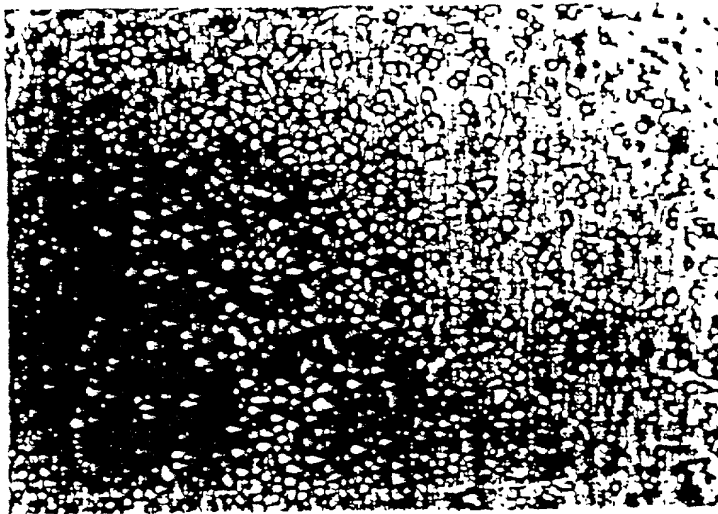
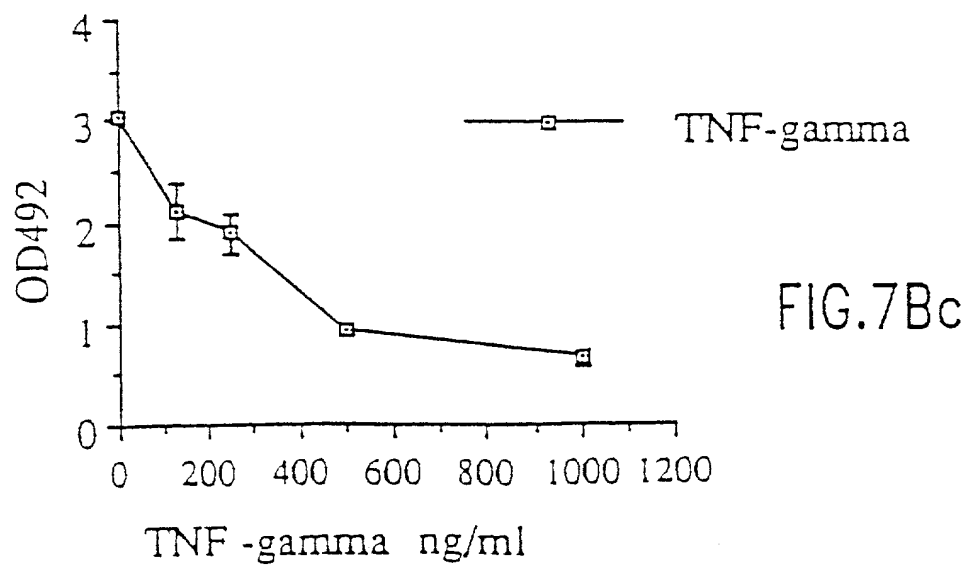
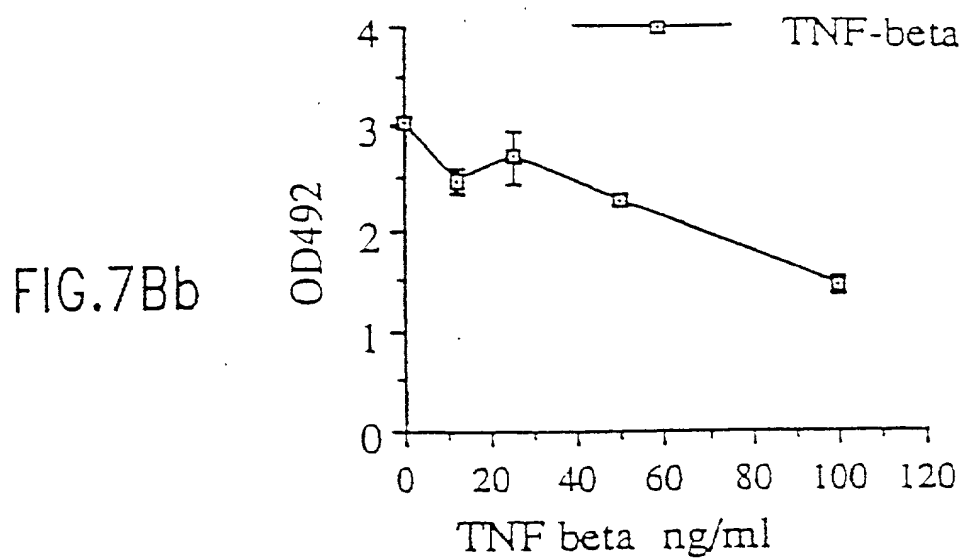
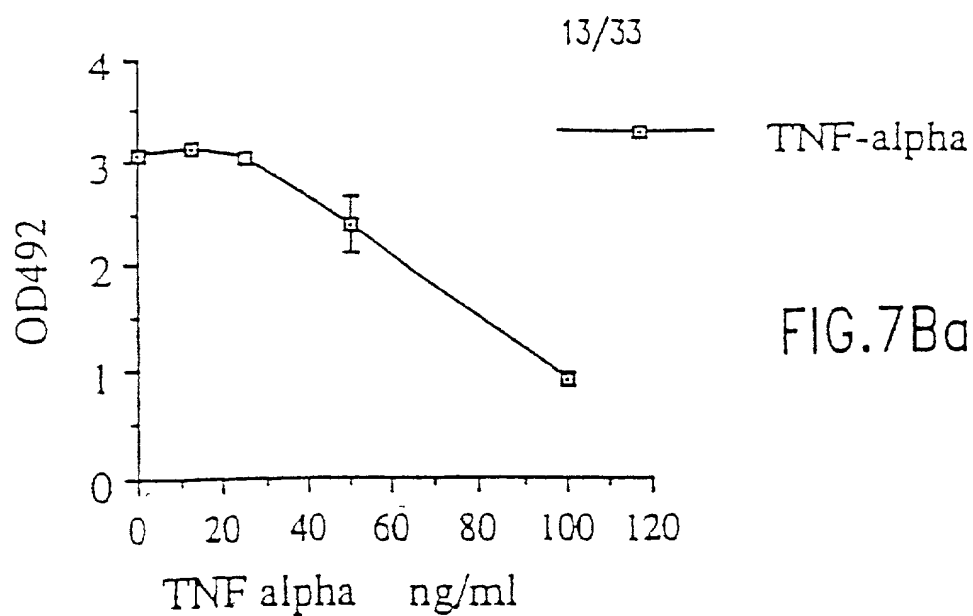


FIG. 7Ac



L929
TNF α

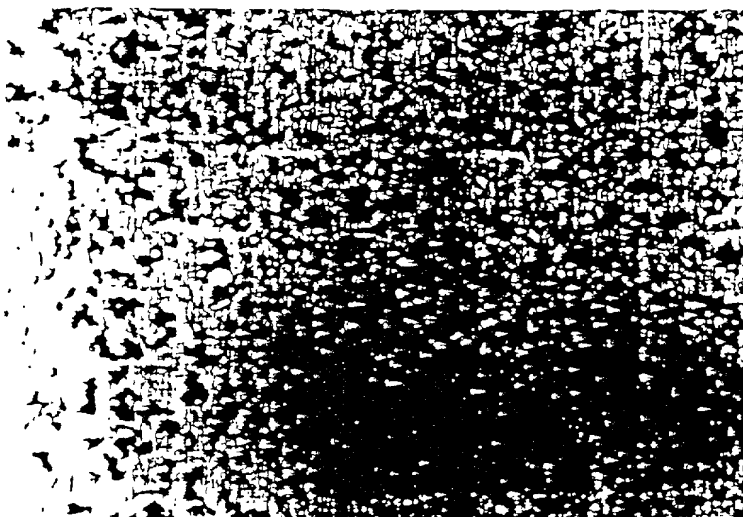


FIG.8B

L929
Control

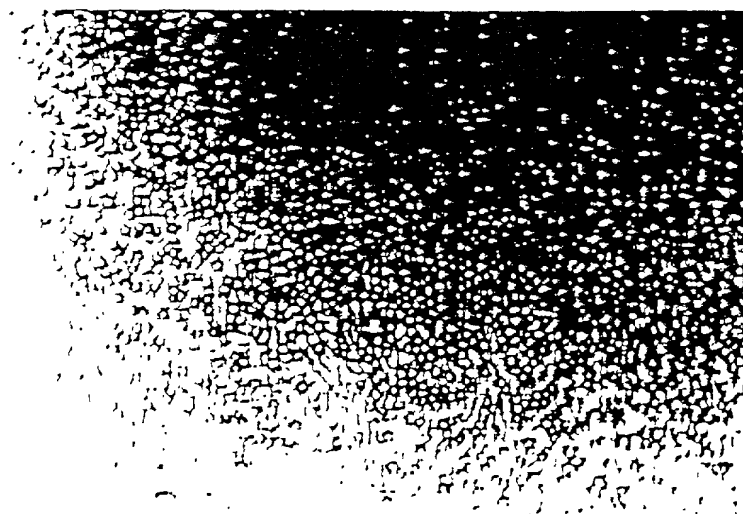


FIG.8A

L929
TNF β

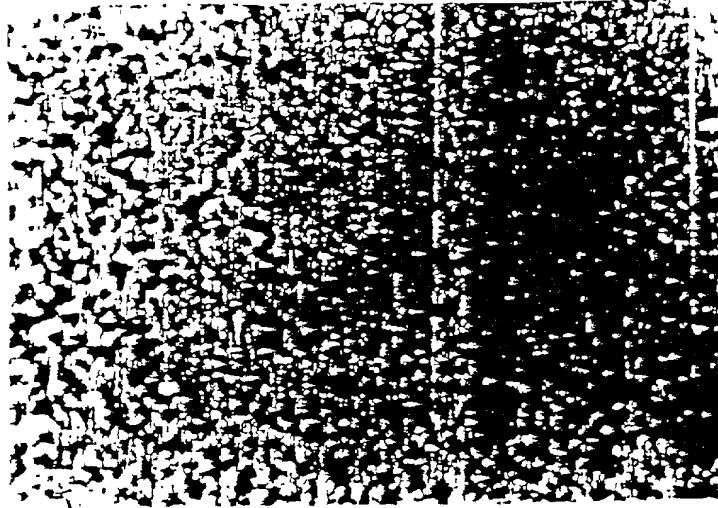


FIG. 8D

L929
TNF γ

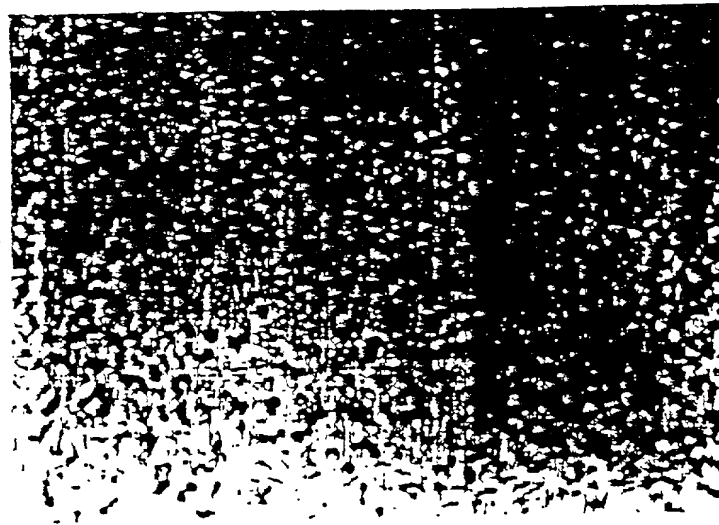
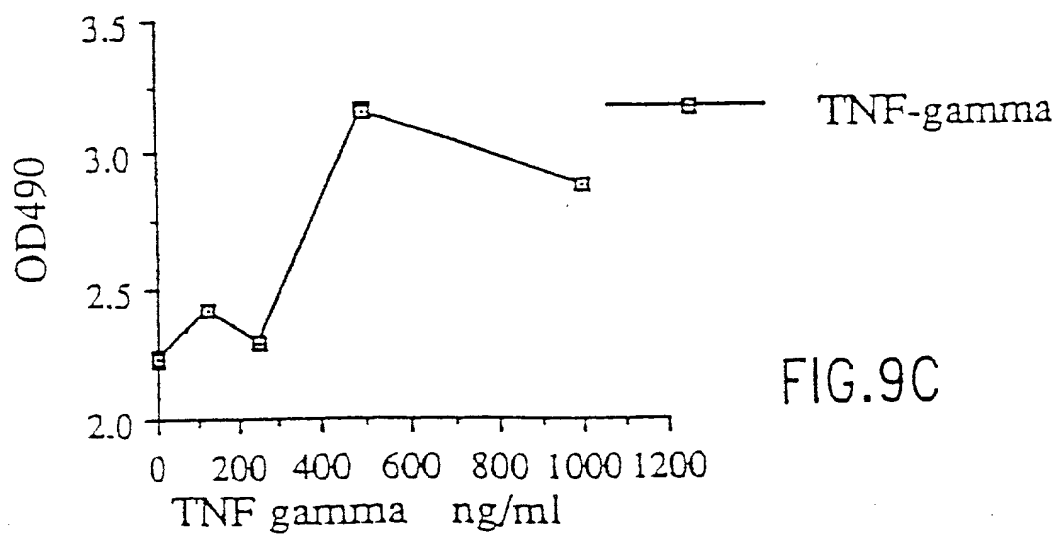
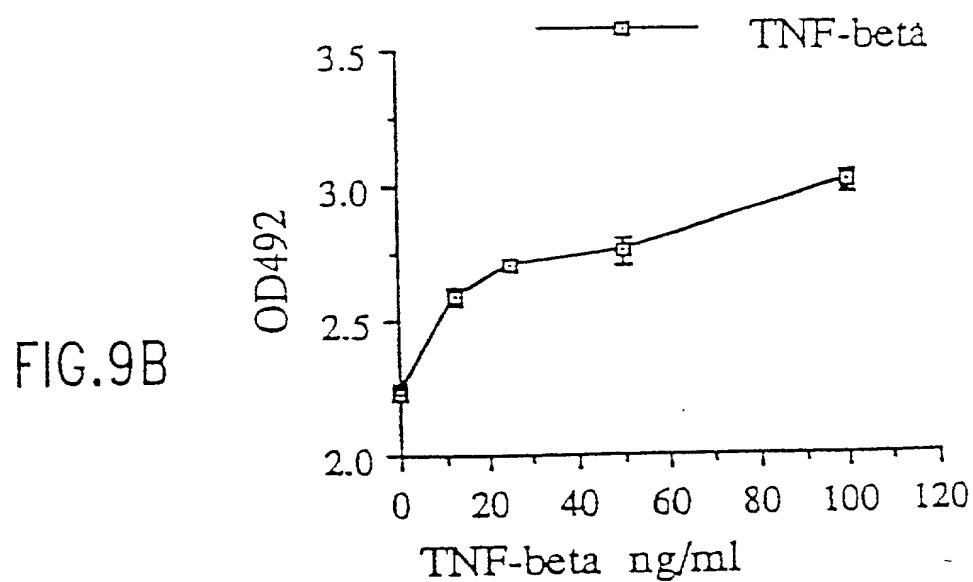
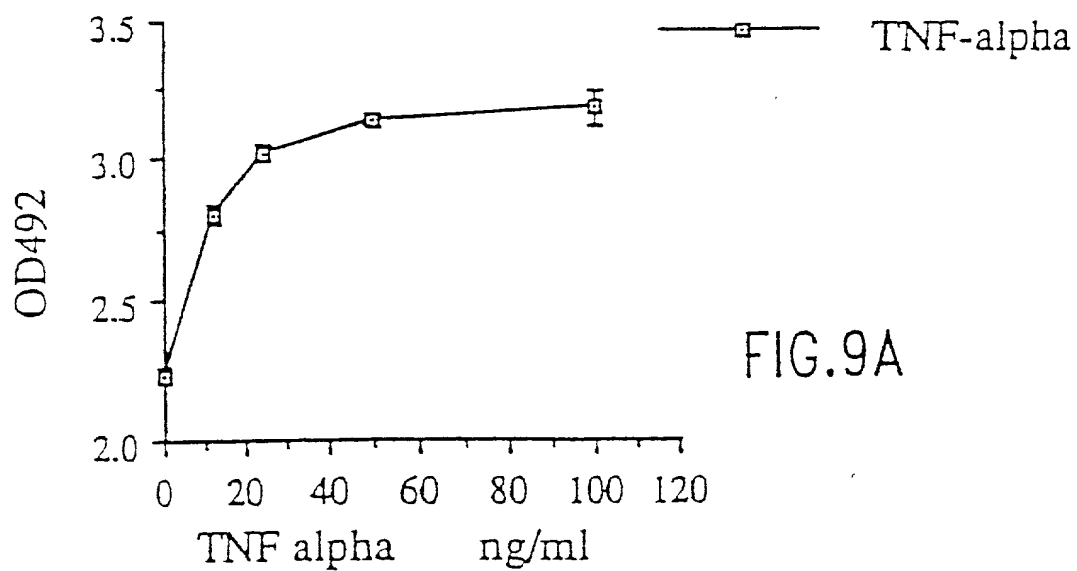


FIG. 8C

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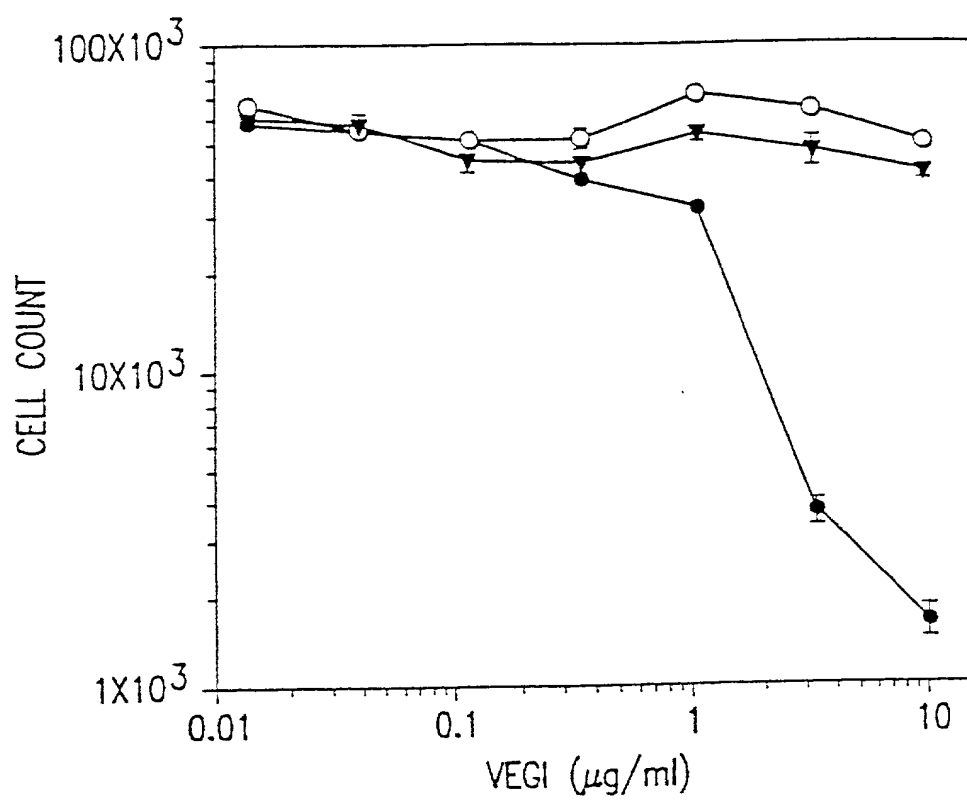


FIG.10

HL60
TNF α

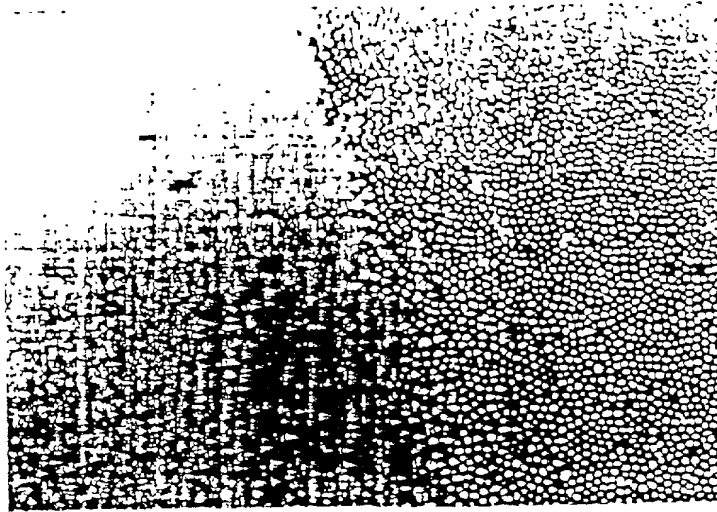


FIG.11B

HL60
Control

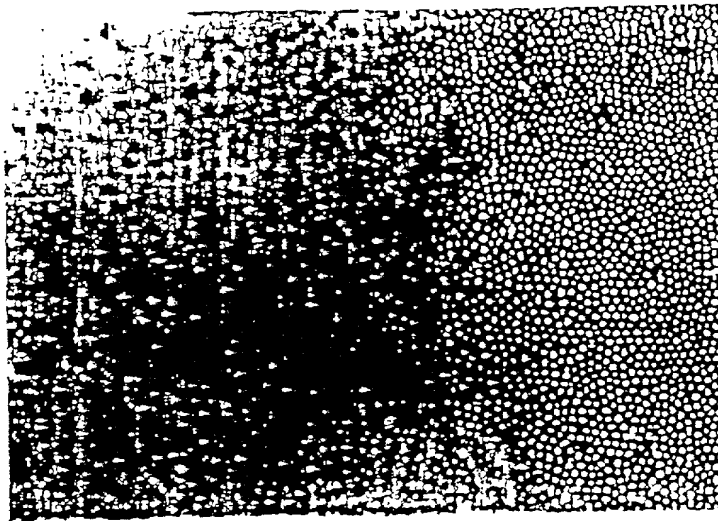


FIG.11A

HL60
TNF γ

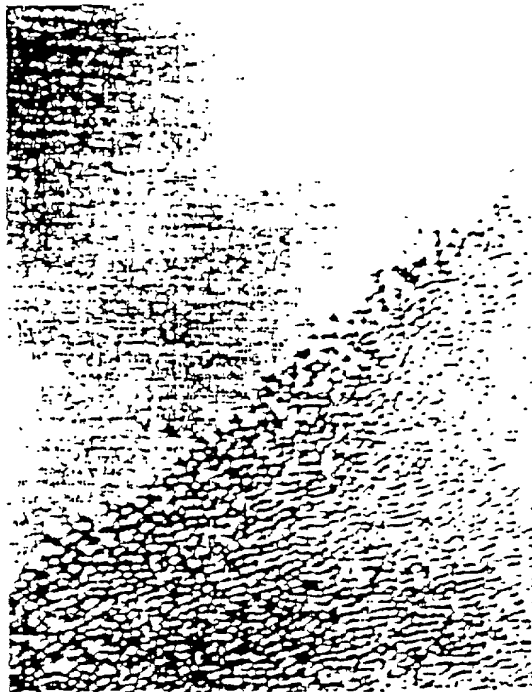


FIG.11C

0989059.020601

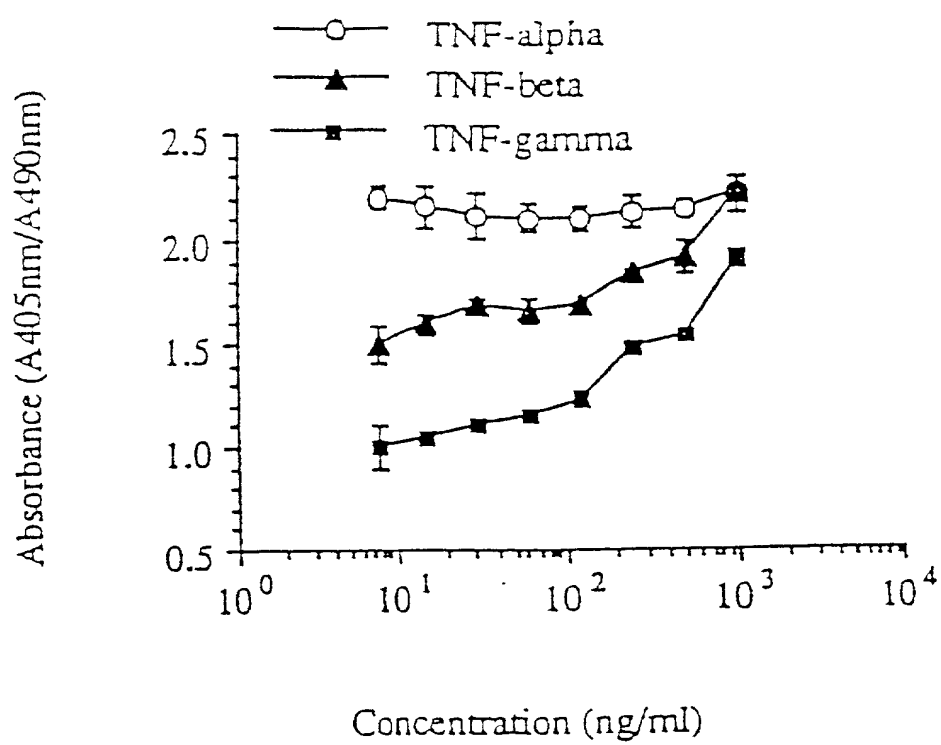


FIG.12

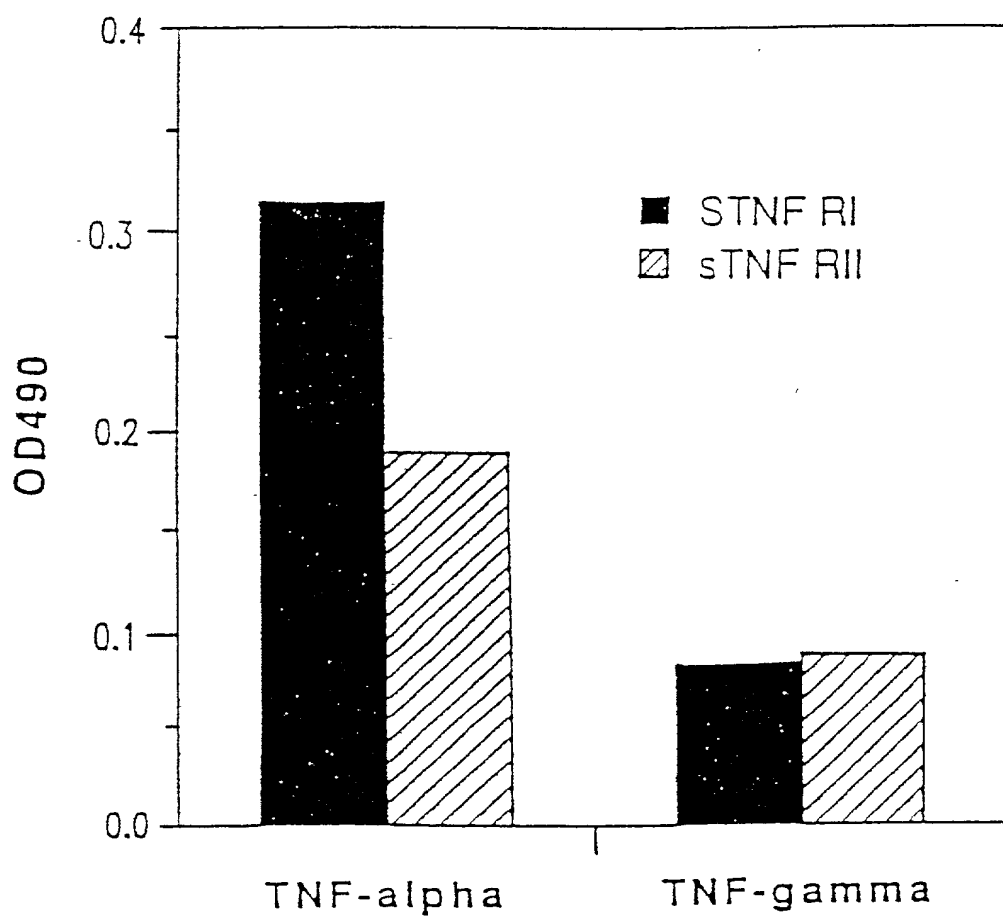


FIG.13

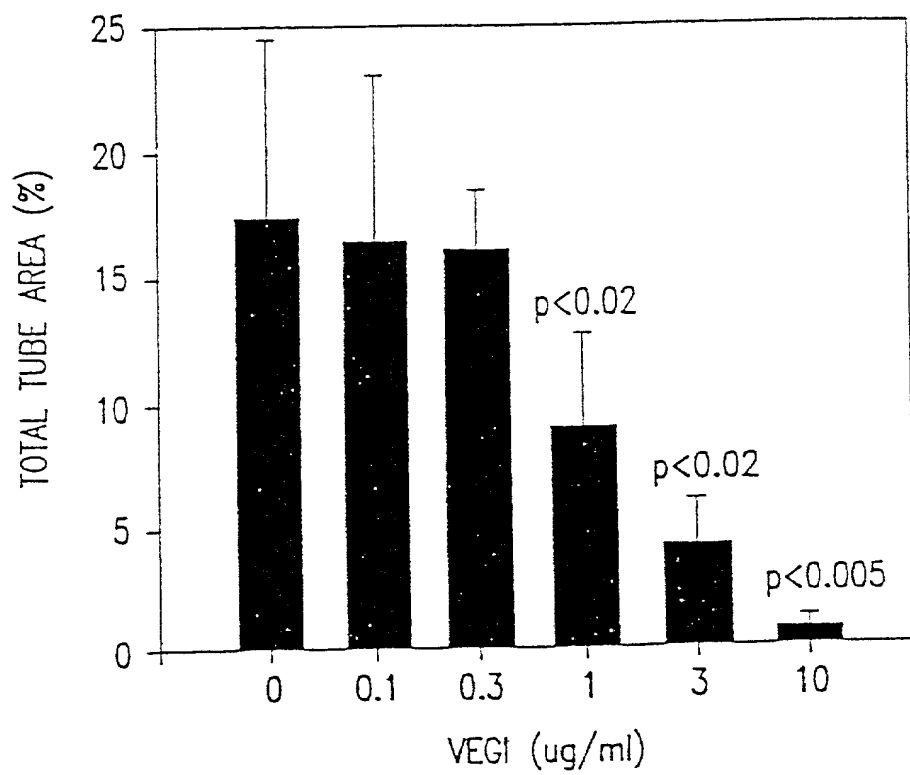


FIG. 14

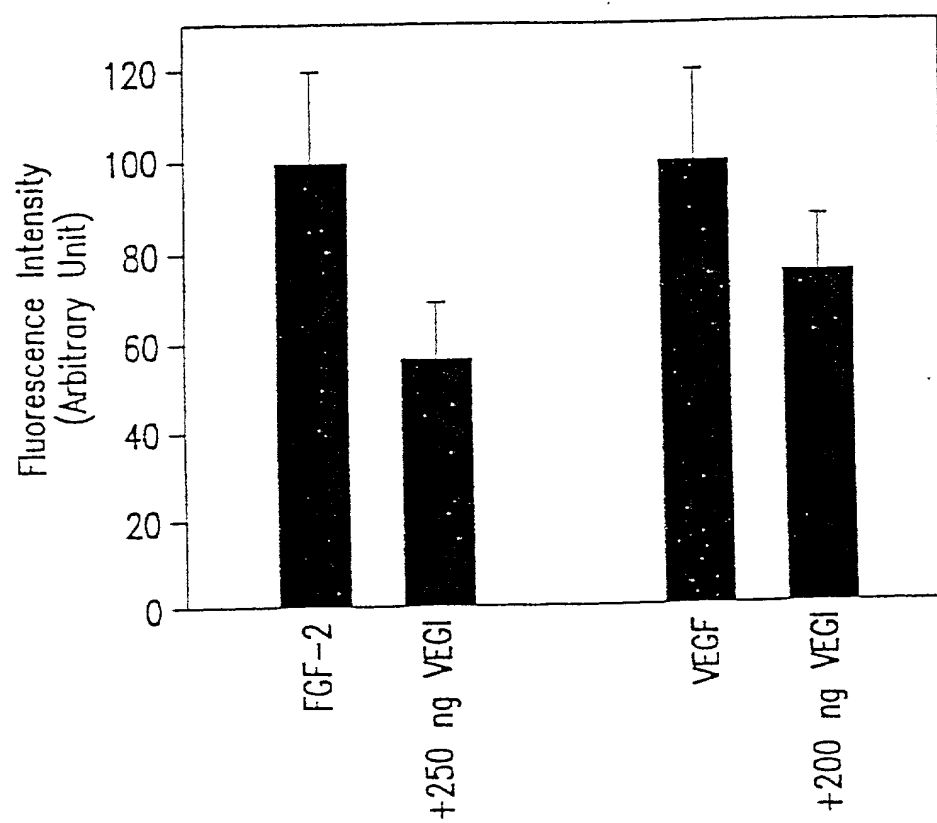


FIG. 15

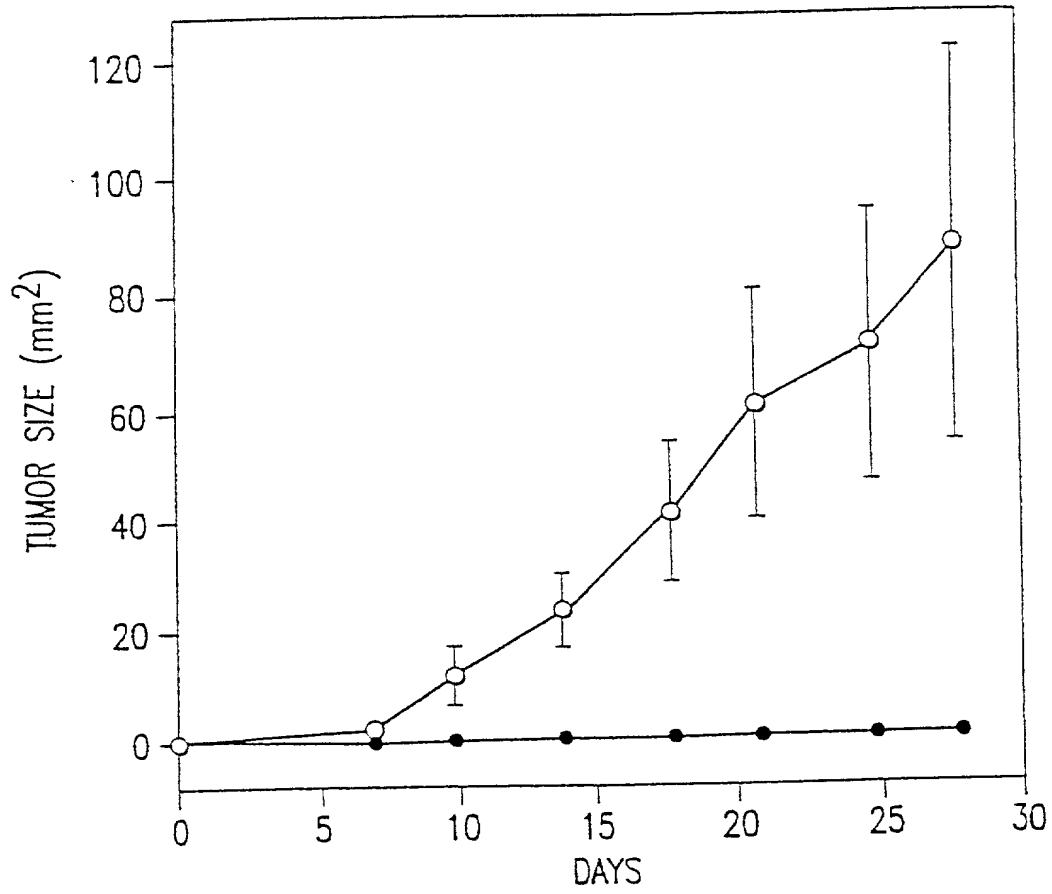


FIG. 16A

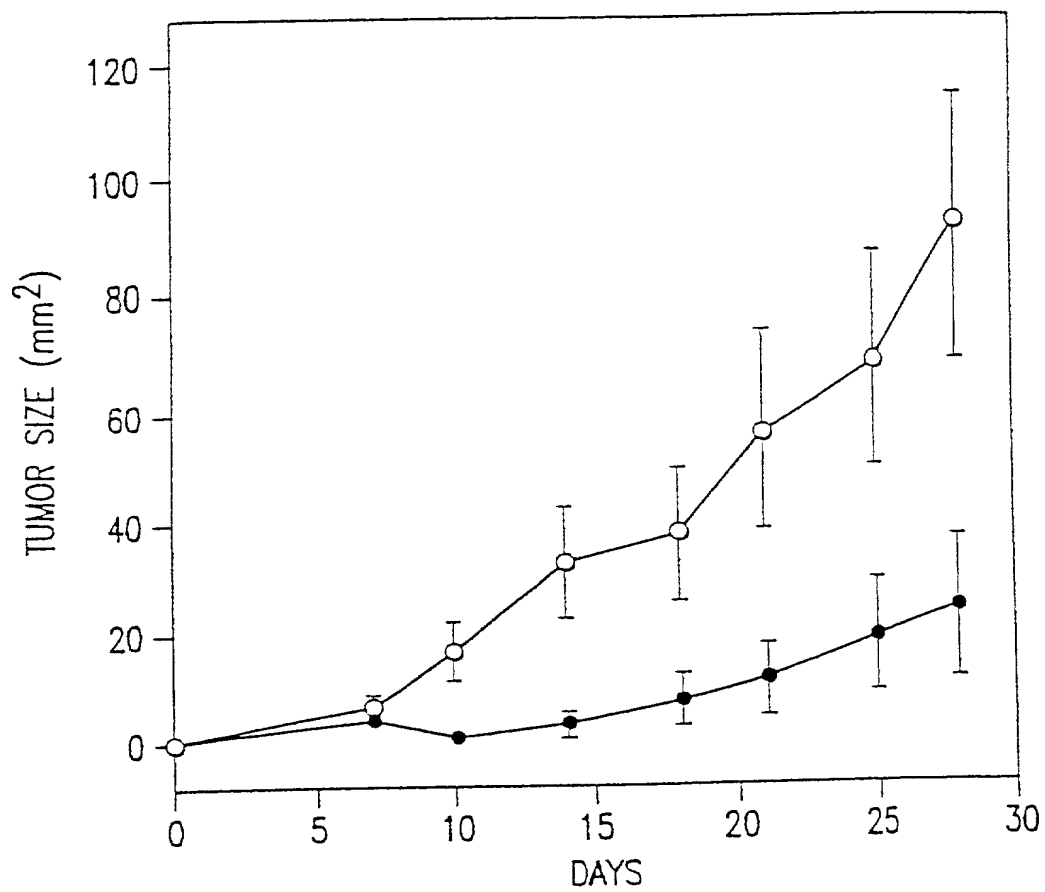


FIG. 16B

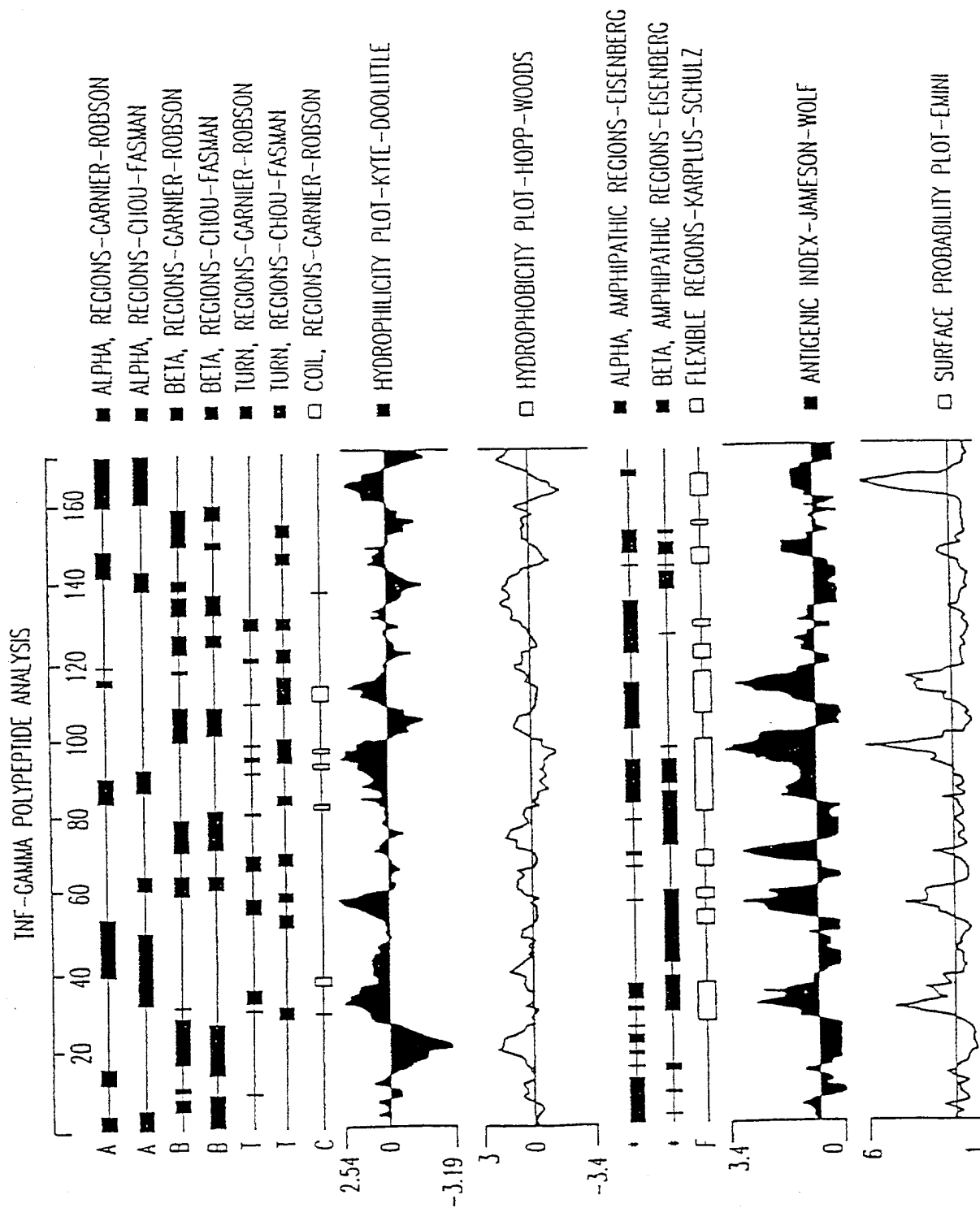


FIG.17

TNF-gamma-alpha vs. TNF-gamma-beta

TNF-gamma-alpha 1 CCCAATCAAGAGAAATTCATACTATCACCAGTTGGCCGACTTTCCAAG 49
 TNF-gamma-alpha 50 TCTAGTGCAGAAATCCAAGGCACCTCACACCTAGAGTTCCTATACCTCTG 99
 TNF-gamma-alpha 100 AGACTCCAGAGGAAAGAACAAGACAGTGCAGAAGGATATGTTAGAACCCA 149
 TNF-gamma-alpha 150 CTGAAAACCTAGAAGGTTGAAAAGGAAGCATACCCTCCTGACCTATAAGA 199
 TNF-gamma-alpha 200 AAATTTTCAGTCTGCAGGGGATATCCTTGTTGGCCCAAGACATTGGTGTT 249
 TNF-gamma-alpha 250 ATCATTTGACTAAGAGGAAATTATTTGTGGTGAGCTCTGAGTGAGGATTA 299
 TNF-gamma-alpha 300 GGACCAGGGAGATGCCAAGTTTCTATCATTACCTCATGCCTGTAAGACA 349
 TNF-gamma-alpha 350 AGTGTTTTGTTCCAATTGATGAATGGGAGAAAACAGTTCAGCCAATCAC 399
 TNF-gamma-alpha 400 TTATGGGCACAGAATGGAATTTGAAGGGTCTGGTGCCTGCCCTTGTCTA 449
 TNF-gamma-alpha 450 CGTAAACAAGAGAGGCATCGATGAGTTTTATCTGAGTCATTTGGGAAAGG 499
 TNF-gamma-alpha 500 ATAATTCTTGACCAAGCCATTTTCTAAACACAGAAGAATAGCGGCATT 549
 TNF-gamma-alpha 550 CCTTAACCTTCATTGTTCTCCAGGATCATAGGTCTCAGGATAAATTAAAA 599
 | | | | | | | | | |
 TNF-gamma-beta 1 ATGCCCGAGGATCTGGGACTGAGCTTTGGGAAACAGCCAGTGTGGAA 48
 TNF-gamma-alpha 600 ATTTTCAGGTCAGACCACTCAGTCTCAGAAAGGCAAAGTAATTTGCCCCA 649
 | | | | | | | | | |
 TNF-gamma-beta 49 ATGCTGCCAGACACGGCAGCTGCAGGCCCAAGCCAGGACAGCAGCGC 98
 TNF-gamma-alpha 650 GGTCAGTCTCAAGATGTTATTCTCTTTGAACAAATGTGTATGTCCAGT 699
 | | | | | | | | | |
 TNF-gamma-beta 99 ACGCTGGGCTCTCACCTGCTGCCTGGTGTGCTCCCCCTCCTTGACGGAC 148
 TNF-gamma-alpha 700 CACATATTCTTCATTCAATTCCTCCCAAGCAGTTTTTAGCTGTTAGGTA 749
 | | | | | | | | | |
 TNF-gamma-beta 149 TCACCACATACCTGCTTGTGAGCCAGCTCCGGGCCAGGAGAGGCCTGT 198
 TNF-gamma-alpha 750 TATTCGATCACTTTAGTCTATTTTGAAAATGATATGAGACGCTTTTAAAG 799
 | | | | | | | | | |
 TNF-gamma-beta 199 GTGCAGTTCAGGCTCTAAAAGCACAGGAGTTTGACCTTCACATCAGCA 248

FIG. 18A

TNF-gamma-alpha vs. TNF-gamma-beta

TNF-gamma-alpha 800 CAAAGTCTACAGTTTCCCAATGAGAAAATTAATCCTCTTTCTTGTCTTTC 849
 | | | | |
 TNF-gamma-beta 249 AGTTTATGCACCTCTTAGAGCAGACGGAGATAAGCCAAGGGCACACCTGA 298
 TNF-gamma-alpha 850 CAGTTGTGAGACAAACTCCACACAGCACCTTAAAAATCAGTTCCCAGCT 899
 |||||
 TNF-gamma-beta 299 CAGTTGTGAGACAAACTCCACACAGCACCTTAAAAATCAGTTCCCAGCT 348
 TNF-gamma-alpha 900 CTGCACTGGGAACATGAACTAGGCCTGGCCTTCACCAAGAACCGAATGAA 949
 |||||
 TNF-gamma-beta 349 CTGCACTGGGAACATGAACTAGGCCTGGCCTTCACCAAGAACCGAATGAA 398
 TNF-gamma-alpha 950 CTATACCAACAAATTCCTGCTGATCCCAGAGTCGGGAGACTACTTCATTT 999
 |||||
 TNF-gamma-beta 399 CTATACCAACAAATTCCTGCTGATCCCAGAGTCGGGAGACTACTTCATTT 448
 TNF-gamma-alpha 1000 ACTCCCAGGTCACATTCCGTGGGATGACCTCTGAGTGCAGTGAAATCAGA 1049
 |||||
 TNF-gamma-beta 449 ACTCCCAGGTCACATTCCGTGGGATGACCTCTGAGTGCAGTGAAATCAGA 498
 TNF-gamma-alpha 1050 CAAGCAGGCCGACCAACAAGCCAGACTCCATCACTGTGGTCATCACCA 1099
 |||||
 TNF-gamma-beta 499 CAAGCAGGCCGACCAACAAGCCAGACTCCATCACTGTGGTCATCACCA 548
 TNF-gamma-alpha 1100 GGTAAACAGACAGCTACCCTGAGCCAACCCAGCTCCTCATGGGGACCAAGT 1149
 |||||
 TNF-gamma-beta 549 GGTAAACAGACAGCTACCCTGAGCCAACCCAGCTCCTCATGGGGACCAAGT 598
 TNF-gamma-alpha 1150 CTGTATGCGAAGTAGGTAGCAACTGGTTCCAGCCCATCTACCTCGGAGCC 1199
 |||||
 TNF-gamma-beta 599 CTGTATGCGAAGTAGGTAGCAACTGGTTCCAGCCCATCTACCTCGGAGCC 648
 TNF-gamma-alpha 1200 ATGTTCTCCTTGCAAGAAGGGGACAAGCTAATGGTGAACGTCAGTGACAT 1249
 |||||
 TNF-gamma-beta 649 ATGTTCTCCTTGCAAGAAGGGGACAAGCTAATGGTGAACGTCAGTGACAT 698
 TNF-gamma-alpha 1250 CTCTTTGGTGGATTACACAAAAGAGATAAAACCTTCTTTGGAGCCTTCT 1299
 |||||
 TNF-gamma-beta 699 CTCTTTGGTGGATTACACAAAAGAGATAAAACCTTCTTTGGAGCCTTCT 748
 TNF-gamma-alpha 1300 TACTATAGGAGGAGAGCAAATATCATTATATGAAAGTCCTCTGCCACCGA 1349
 |||||
 TNF-gamma-beta 749 TACTATAGGAGGAGAGCAAATATCATTATATGAAAGTCCTCTGCCACCGA 798
 TNF-gamma-alpha 1350 GTTCCTAATTTTCTTTGTTCAAATGTAATTATAACCAGGGGTTTTCTTGG 1399
 |||||
 TNF-gamma-beta 799 GTTCCTAATTTTCTTTGTTCAAATGTAATTATAACCAGGGGTTTTCTTGG 848
 TNF-gamma-alpha 1400 GCGCCGGAGTAGGGGGCATTCACAGGGACAACGGTTTAGCTATGAAATT 1449
 |||||
 TNF-gamma-beta 849 GCGCCGGAGTAGGGGCATTCCACAGGGACAACGGTTTAGCTATGAAATT 897

FIG. 18B

TNF-gamma-alpha vs. TNF-gamma-beta

TNF-gamma-alpha 1450 TGGGG.CCAAAATTTACACITTCATGTGCCTTACTGATGAGAGTACTAAC 1498
 ||||| ||||||||||||||||||||||||||||||||||||||||
 TNF-gamma-beta 898 TGGGGCCCAAAATTTACACITTCATGTGCCTTACTGATGAGAGTACTAAC 947
 TNF-gamma-alpha 1499 TGGAAAAAGGCTGAAGAGAGCAAATATATTATTAAGATGGGTTGGAGGAT 1548
 ||||||||||||||||||||||||||||||||||||||||
 TNF-gamma-beta 948 TGGAAAAAGGCTGAAGAGAGCAAATATATTATTAAGATGGGTTGGAGGAT 997
 TNF-gamma-alpha 1549 TGGCGAGTTTCTAAATATTAAGACACTGATCACTAAATGAATGGATGATC 1598
 ||||||||||||||||||||||||||||||||||||||||
 TNF-gamma-beta 998 TGGCGAGTTTCTAAATATTAAGACACTGATCACTAAATGAATGGATGATC 1047
 TNF-gamma-alpha 1599 TACTCGGGTCAGGATTGAAAGAGAAATATTTCAACACCTCCCTGCTATAC 1648
 ||||||||||||||||||||||||||||||||||||
 TNF-gamma-beta 1048 TACTCGGGTCAGGATTGAAAGAGAAATATTTCAACACCTTCTGCTATAC 1097
 TNF-gamma-alpha 1649 AATGGTCACCACTGGTCCAGTTATTGTTCAATTTGATCATAAATTTGCTT 1698
 ||||||||||||||||
 TNF-gamma-beta 1098 AATGGTCACCACTGGTCCA 1116
 TNF-gamma-alpha 1699 CAATTCAGGAGCTTTGAAGGAAGTCCAAGGAAAGCTCTAGAAAACAGTAT 1748
 TNF-gamma-alpha 1749 AAATTTTCAGAGGCAAAATCCTTCACCAATTTTCCACATACTTTCATGC 1798
 TNF-gamma-alpha 1799 CTTCCTAAAAAAATGAAAAGAGAGTTGGTATGTCTCATGAATGTTTAC 1848
 TNF-gamma-alpha 1849 ACACAAGGAGTTGGTTTTTCATGTCTATCTACAGCATATGAGAAAAGCTACC 1898
 TNF-gamma-alpha 1899 TTTCTTTTGATTATGTACACAGATATCTAAATAAGGAAGTTTGAGTTTCA 1948
 TNF-gamma-alpha 1949 CATGTATATCCCAAATACAACAGTTGCTTGTATTTCAGTAGAGTTTCTTG 1998
 TNF-gamma-alpha 1999 CCCACCTATTTTGTGCTGGGTTCTACCTTAACCCAGAAGACACTATGAAA 2048
 TNF-gamma-alpha 2049 AACAAGACAGACTCCACTCAAAATTTATATGAACACCACTAGATACTTCC 2098
 TNF-gamma-alpha 2099 TGATCAAACATCAGTCAACATACTCTAAAGAATAACTCCAAGTCTTGGCC 2148
 TNF-gamma-alpha 2149 AGGCGCAGTGGCTCACACCTGTAATCCCAACACTTTGGGAGGCCAAGGTG 2198
 TNF-gamma-alpha 2199 GGTGGATCATCTAAGGCCGGGAGTTCAAGACCAGCCTGACCAACGTGGAG 2248

FIG. 18C

TNF-gamma-alpha vs. TNF-gamma-beta

TNF-gamma-alpha 2249 AAACCCCATCTCTACTNAAAATACNAAATTAGCCGGGCGTGGTAGCGCAT 2298
TNF-gamma-alpha 2299 GGCTGTAANCCTGGCTACTCAGGAGGCCGAGGCAGAANAATTNCTTGAAC 2348
TNF-gamma-alpha 2349 TGGGGAGGCAGAGGTTGCGGTGAGCCCAGANCGGCCATTGCACTCCAGC 2398
TNF-gamma-alpha 2399 CTGGGTAACAAGAGCAAACTCTGTCCAAAAAAAAAAAAAAAAAAAA 2442

FIG. 18D

TNF-gamma-beta	1	MAEDLGLSFGETASVEMLPEHGCSCRPKARSSSARWALTCCLVLLPFLAGL	50
TNF-gamma-alpha	1	MRRFLSKVYSFPMRKLILFLVFP	23
TNF-gamma-beta	51	TTYLLVSQLRACGEACVGFQALKGQEFAPSHQQVYAPLRADGDKPRAHLT	100
TNF-gamma-alpha	24	VVROTPTQHFKNQFPALHWEHELGLAFTKNRMNYTNKFLLIPESGDYFIY 	73
TNF-gamma-beta	101	VVROTPTQHFKNQFPALHWEHELGLAFTKNRMNYTNKFLLIPESGDYFIY 	150
TNF-gamma-alpha	74	SQVTFRGMTSECSEIRQAGRPNKPDSTVVI TKVTD SYPEPTQLLMGTKS 	123
TNF-gamma-beta	151	SQVTFRGMTSECSEIRQAGRPNKPDSTVVI TKVTD SYPEPTQLLMGTKS 	200
TNF-gamma-alpha	124	VCEVGSNWFQPIYLGAMFSLOEGDKLMVNVSDSLVDYTKEDKTFFGAFL 	173
TNF-gamma-beta	201	VCEVGSNWFQPIYLGAMFSLOEGDKLMVNVSDSLVDYTKEDKTFFGAFL 	250
TNF-gamma-alpha	174	L	174
TNF-gamma-beta	251	L	251

FIG. 19

TNF-gamma-beta

1 ATGCCCAGCATCTGGGACTGAGCTTTGGGAAACAGCCAGTGTGGAAATGCTGCCAGAG 60
 1 M A E D L G L S F G E T A S V E M L P E 20
 61 CACGGCAGCTGCAGGCCCCAAGGCCAGGAGCAGCAGCGCAGCTGGGCTCTCACCTGCTGC 120
 21 H G S C R P K A R S S S A R W A L T C C 40
 121 CTGGTGTGCTCCCTTCCCTGCGAGACTACCACATACCTGCTTGTCAGCCAGCTCCGG 180
 41 L V L L P F L A G L T T Y L L V S Q L R 60
 181 GCCCAGCGAGAGCCCTGTGTCCAGTTCCAGCTCTAAAAGCACAGGAGTTTGCACCTTCA 240
 61 A Q G E A C V Q F Q A L K G Q E F A P S 80
 241 CATCAGCAAGTTTATGCACCTCTTAGAGCAGACGGAGATAAGCCAAGGGCACACCTGACA 300
 81 H Q Q V Y A P L R A D G D K P R A H L T 100
 301 GTTGTGAGACAACTCCACACAGCACTTTAAAAATCAGTTCCCAGCTCTGCACTGGGAA 360
 101 V V R Q T P T Q H F K N Q F P A L H W E 120
 361 CATGAAGTGGCTGGCTTACCAAGAACCGAATGAAGTATACCAACAAATTCTGCTG 420
 121 H E L G L A F T K N R M N Y T N K F L L 140
 421 ATCCCAGAGTCGGGAGACTACTTCATTTACTCCCAGGTCACATTCCGTGGGATGACCTCT 480
 141 I P E S G D Y F I Y S Q V T F R G M T S 160
 481 GAGTGCAGTGAATCAGACAAGCAGGCCGACCAACAAGCCAGACTCCATCACTGTGGTC 540
 161 E C S E I R Q A G R P N K P D S I T V V 180
 541 ATACCAAGGTAACAGACAGCTACCCTGAGCCCAACCCAGCTCCTCATGGGACCAAGTCT 600
 181 I T K V T D S Y P E P T Q L L M G T K S 200
 601 GTATGCCAAGTAGGTAGCAACTGGTTCCAGCCCATCTACCTCGGAGCCATGTTCTCCTTG 660
 201 V C E V G S N W F Q P I Y L G A M F S L 220
 661 CAAGAAGGGACAAGCTAATGGTGAACGTCAAGTACATCTCTTTGGTGGATTACACAAA 720
 221 Q E G D K L M V N V S D I S L V D Y T K 240
 721 GAAGATAAAACCTTCTTTGGAGCCTTCTTACTATAGGAGGAGAGCAAATATCATTATATG 780
 241 E D K T F F G A F L L 251
 781 AAAGTCCTCTGCCACCGAGTTCCTAATTTTCTTTGTTCAAATGTAATTATAACCAGGGGT 840
 841 TTTCTTGGGCCCCGGAGTAGGGCATTCCACAGGGACAACGGTTTAGCTATGAAATTTGG 900

FIG. 20A

TNF-gamma-beta

901 GGCCCAAAATTTACACTTCATGTCCTTACTGATGAGAGTACTAACTGGAAAAAGGCTG 960
961 AAGAGAGCAAATATATTATTAAGATGGGTGGAGGATTGGCGAGTTTCTAAATATTAAGA 1020
1021 CACTGATCACTAAATGAATGGATGATCTACTCGGGTCAGGATTGAAAGAGAAATATTTCA 1080
1081 ACACCTTCCTGCTATACAATGGTCACCAGTGGTCCA 1116

FIG. 20B